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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,711	07/14/2003	Katsumi Terakawa	2927-0150P	4189

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EXAMINER	
FERGUSON, LAWRENCE D	
ART UNIT	**PAPER NUMBER**
1774	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/617,711	TERAKAWA ET AL.	
	Examiner	Art Unit	
	Lawrence D. Ferguson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 14 July 2003 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 7/14/03.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections – 35 USC § 103(a)

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schlueter, Jr. et al. (U.S. 5,952301) in view of Tanaka et al (U.S. 5,978,638).

Schlueter, Jr. discloses a conductive belt comprising an electroconductive substrate (base) layer, an intermediate layer made of elastomer material and an outer layer made of rubber (column 8, lines 36-45) where the belt material has physical characteristics such as tensile modulus of 300,000 to about 1,5000,000 PSI and volume electric resistance of 10^8 to 10^{11} ohm cm (column 3, lines 24-31 and column 5, line 56 through column 6,line 6). Schlueter, Jr. further discloses the intermediate layer has a hardness of from about 25 to about 80 Shore A and a thickness from about 25 to about 5,000 micrometers (column 8, lines 50-60). The thickness of the base layer is from about 25 to about 150 micrometers (column 5,lines 56-59) and the thickness of the outer coating layer is 25 to 5000 micrometers, having a volume resistivity of 10^4 to 10^{16} (column 8,lines 15-23). Schlueter discloses the belt can be used in a printing machine

(column 1, lines 5-6 and column 11,lines 31-33). Schlueter, Jr. does not explicitly teach the intermediate layer is composed of polyurethane.

Tanaka teaches an intermediate transfer belt having a base layer and two covering layers (column 4,lines 10-17), where the intermediate layer has a volume resistivity of 106 to 1012 ohms cm (column 9,lines 58-64), where the intermediate layer is composed of polyurethane elastomer (column 11,lines 4-17). Therefore, it would have been obvious to one of ordinary skill in the art to have employed the polyurethane, as taught in Tanaka, in the intermediate layer of Schlueter, Jr. because the polyurethane material provides improved flexibility, while also providing improved bonding between the base layer and coating layer.

In claims 1-3, 5, 8 and 9 the phrases, "by adding an electroconductive agent to said resin," "formed by hardening a isocyanate-terminated prepolymer obtained from a polyol containing polypropylene glycol or/and a hydroxyl-terminated liquid rubber as a main component thereof and aromatic diisocyanate with aromatic diamine or/and a polyol," "isocyanate-terminated prepolymer is formed by mixing a reactant of polypropylene glycol and aromatic diisocyanate with a reactant of polyol containing a hydroxyl-terminated liquid rubber as a main component thereof and said aromatic diisocyanate," "said base layer is composed of a centrifugally molded seamless belt substrate; said intermediate layer if formed...and hardening said material" and "said base layer is composed of a seamless belt substrate by applying said seamless belt substrate by a dispenser and drying and hardening said seamless belt substrate...and hardening said material" respectively introduces a process limitation to the product

claim. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966. Further, process limitations are given no patentable weight in product claims. In claim 5, the phrase, "supposing that a volume electric resistance value of said intermediate layer to which said electroconductivity is auxiliarily imparted is indicated by R at a voltage of 500v, a temperature of 23 C, and a relative humidity of 55%; a volume electric resistance value of said intermediate layer not containing said electroconductive agent is indicated by R1 at voltage of 500V...said electroconducitve agent is auxiliarily added to said elastomer in a condition of $0.1 \leq \text{Log } (R2) \leq 5$" constitutes a 'capable of" limitation and that such a recitation that an element is 'capable of' performing a function is not a positive limitation but only requires the ability to so perform.

Claim Rejections – 35 USC § 103(a)

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schlueter, Jr. et al. (U.S. 5,952301) in view of Tanaka et al (U.S. 5,978,638) further in view of Nakazawa et al (U.S. 6,852,400).

Schlueter, Jr. in view of Tanaka is relied upon for claim 1. The combination of Schlueter, Jr. and Tanaka does not disclose a flame retardant compound in the

intermediate layer. Nakazawa teaches an intermediate transfer belt having a three-layer configuration (column 4, lines 55-57) where the belt material comprises a high level of flame retardancy (column 5,lines 21-33). Therefore, it would have been obvious to one of ordinary skill in the art to have employed the flame retardant material, as taught in Nakazawa, in the conductive belt of Schlueter, Jr. to provides improved durability and resiliency of the belt.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Ferguson whose telephone number is 571-272-1522. The examiner can normally be reached on Monday through Friday 9:00 AM – 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye, can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Lawrence Ferguson
Patent Examiner
AU 1774

RENA DYE
SUPERVISORY PATENT EXAMINER
A.U. 1774 6/27/05